

TRANSMISSION RATE COMPENSATION FOR A DIGITAL MULTI-TONE TRANSCIVER

ABSTRACT OF THE DISCLOSURE

5 A circuit compensating for the difference in transmission rate of digital samples generated in
transmit and receive paths between a user and a transceiver processing in the frequency domain, such as
a digital multi-tone (DMT) transceiver. Compensation of the DMT transmission rate in the receive path
in accordance with exemplary embodiments of the present employs zero-padding of the frequency
domain coefficients generated by the DMT transceiver prior to applying an inverse transform, such as the
10 inverse fast Fourier transform (IFFT). Zero-padding the frequency domain coefficients allows for the
compensation of the transmission rate in the receive path by generating digital samples from the
frequency domain coefficients with an inverse transform having a rate matched to the frequency domain
transform and rate employed in the transmit path.